

THE ADOPTION OF VALUE MANAGEMENT BY QUANTITY SURVEYING FIRMS IN MALAYSIA

Received: 05 March 2025 | Accepted: 08 September 2025 | Available Online: 30 November 2025

DOI: 10.31436/japcm.v15i2.970

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ABSTRACT

Quantity Surveyors (QS) are well-positioned to promote Value Management (VM) in construction projects due to their cost expertise. However, their knowledge and awareness of VM are insufficient, and they often confuse it with cost-cutting. Despite VM's introduction in Malaysia in the early 1980s, its adoption has been limited. The technical application of VM within Quantity Surveying (QS) firms in Malaysia remains unclear, necessitating further investigation. This research aims to determine VM adoption by QS firms, identify the obstacles, and propose strategies to overcome the obstacles. Data was collected through a questionnaire survey of 32 respondents from 32 QS firms in Malaysia. The findings reveal that VM adoption by QS firms in Malaysia is generally low. The obstacles include time constraints due to VM's lengthy process, client reluctance to fund VM services, designer reluctance to adopt VM, and a shortage of trained VM professionals. Strategies to overcome these obstacles include educating clients and decision-makers about VM's importance, making VM knowledge accessible, and improving VM curricula in higher education institutions.

Keywords: Adoption, Obstacles, Strategies, Value Management (VM).

1.0 INTRODUCTION

The introduction of value management in the early 1980s in Malaysia shed an affirmative light on QS's taking the lead in developing value management as one of its niche areas (Wei & Keong, 2016). However, VM is not popularly adopted due to a lack of time to implement it (RICS, 2017). King et al. (2020) reveal that VM is frequently practised voluntarily or on the client's request. In common cases, VM is carried out in a specific project rather than being integrated into the company's management system. One of the contributing factors is the role of designers in managing other projects simultaneously. Architects often perceive VM studies as a means of criticising their work and finding shortcomings in their designs rather than as a means of improvement (Ling et al., 2020). As for QS, tight deadlines have made it difficult for them to carry out VM in a particular project while preparing other projects' requirements, because VM is a time-consuming process. Apart from that, even though VM is well-known, it is not included in the abilities that the regulatory body, RICS, requires of QS when taking their Assessment of Professional Competence (Oki & Ogunsemi, 2017; as cited in Spellacy et al., 2021).

Past research from Cheah & Ting (2005), Wei & Keong (2016), Ling et al. (2020), Li et al. (2022), etc., has discussed the benefits and challenges of VM implementation in various types of projects. However, the technical aspect of the VM application in Malaysia, especially whether it is integrated into QS firms across Malaysia, has yet to be discussed. Therefore, the objectives of this research are: (1) to determine the adoption of Value Management by Quantity Surveying firms in their practices, (2) to identify the obstacles in adopting Value Management by Quantity Surveying firms, and (3) to determine the strategies to overcome the obstacles in adopting Value Management by Quantity Surveying firms. Quantitative and qualitative data collection methods achieve this research's objectives. The quantitative method involves data collection through a questionnaire survey, while the qualitative method involves semi-structured interviews. The questions asked for data collection are formulated based on the inputs from the literature review.

The research scope for this study is the adoption of Value Management in Quantity Surveying firms. The respondents are limited to the Quantity Surveyors currently working in Consultant Quantity Surveyors companies registered with the Board of Quantity Surveyors Malaysia (BQSM) operating in Malaysia. This study is significant in providing information on adopting Value Management in the Quantity Surveying firms. This research presents the current state of Malaysian Quantity Surveying companies in adopting Value Management throughout development projects. It is crucial to learn the obstacles hindering the application of Value Management so a strategy can be formed to overcome these obstacles. The findings are the pinnacle for QS to improve its professional services to its clients further. This research is also meant to help Quantity Surveying graduates understand the overview of Value Management applications in Malaysian Quantity Surveying firms.

2.0 LITERATURE REVIEW

According to the IVMA (2019), Value Management is “a planning and review process which is distinctively different to other processes because of its structured approach using a prescribed Work Plan and an analytical focus to achieve best value or, where appropriate, best value for money”. VM is essential to improve the value of a project, product, process, service or organisation by analysing functions. Exercising VM in construction is usually workshop-based, where a multidisciplinary team is involved and an independent facilitator is commonly needed. In Malaysia, it is mandatory for a government project that costs RM50 million and above to go through the process of value management (EPU, 2011).

2.1 Adoption of Value Management

The adoption of VM is studied from different aspects of its technical application. In the context of organisational practices, Li et al. (2022) find that VM was not integrated in most of the organisations surveyed, and project teams did not practice its concept. According to Lin et al. (2022), the experience of organisations and practitioners is found to have a substantial correlation with VM adoption. The author further explains that smaller project members receive fewer opportunities from their organisations to obtain VM study experience. From the aspect of VM adoption phases, Ghani et al. (2021) find that the VA study is performed after the project budget approval, which indicates the 'decision to construct' demarcation point. This study is against the VM manual, which requires VA to be conducted at the briefing stage, which took place before the project obtains approval. King et al. (2020) also discovered that VE is frequently done after the contract has been signed, once construction has started, and in cases of budget overruns or other unanticipated events. Ellis et al. (2005) also reveal that the VM process rarely goes beyond the tender stage and is seldom carried out.

Saifulnizam et al. (2011) imply that VM in Malaysia is not recognised as a consultant QS practice job structure in construction project types. However, it is considered a method to assist with decision-making in construction projects. To support this, Jaapar et al. (2012) point out that VM is adopted in infrastructure, residential, and flood irrigation projects. In client types, King et al. (2020) reveal that VM is frequently practised voluntarily or on the client's request. Consequently, Ahmad (2011) stated that VM has been adopted in 71 public projects in Malaysia. To support this, Jaapar et al. (2012) reveal that VM studies conducted by the public sector are through workshops, as the VM manual recommends. Similarly, Ling et al. (2020) find that VM is practised extensively among developers in the private sector to increase the value of their projects.

Regarding contract value, the Economic Planning Unit (EPU) of the Prime Minister's Department of the Malaysian government has mandated the use of VM in governmental programs and projects valued at RM50 million and above (EPU, 2011). However, Lin et al. (2022) argue that, regardless of project type, the adoption of VM by organisations for smaller construction projects under RM5 million is relatively low and highly dependent on the project size.

2.2 Obstacles to Adopt Value Management

The first obstacle to adopting VM is the misconception among the QS. Usman et al. (2013), Ling et al. (2020), and Wei & Keong (2016) find that the primary obstacles impeding the execution of VM are a poor understanding and experience in VM study. King et al. (2020) argue that QS are aware of the concept but often misunderstand it. Li et al. (2022) explain that the majority believe VM is rather a strategy or concept than a profession, hence they lack motivation to explore. Secondly, Lin et al. (2022) point out that one of the main obstacles to VM expansion within organisations is a shortage of VM specialists. Jaapar et al. (2009) discovered that many organisations had never participated in a VM training, and that there was a dearth of advice from relevant experts and inadequate facilitation during the workshops. While most understand VE, Kineber et al. (2022) find that only a few have formal VE training.

In addition, the obstacle to adopting VM is caused by the inefficient conduct of VM studies. Spellacy et al. (2021) found that the VM study process has not been carried out efficiently, ultimately leading to ineffective outcomes. This means VM is not conducted according to the VM manual, which shall begin as early as possible during the inception stage and involve the required participants, including the QS. Also, Usman et al. (2013) and Ling et al. (2020) agree that implementing VM in a project is a time constraint. Due to its lengthy process, Wei & Keong (2016) find that VM causes interruption to the normal work schedule. Tight deadlines have made it difficult for the QS to carry out VM in a particular project while preparing other project requirements because VM is a time-consuming process (RICS, 2017). Organisations are also less likely to adopt VM due to designers' reluctance. Ling et al. (2020) find that many designers have a vigilant mindset to avoid taking responsibility for legal issues. The misconception that VM studies reflects a designer's incompetence and integrity, which is why designers are unwilling to consider alternative approaches and revisions to their designs (Rad & Yamini, 2016).

Furthermore, Othman et al. (2019) and Kineber et al. (2023) find that the decision-makers are often absent during the VM study. Low participation of decision-makers in VM workshops has created a communication gap between the clients and other consultants. Additionally, organisations are less likely to adopt VM due to the client's reluctance to fund VM services. Although VM requires an experienced facilitator to ensure the exercise is conducted systematically, convincing the client to pay for one can be challenging, as Bennett & Mayouf (2021) claimed. Moreover, Othman et al. (2019) and Kim et al. (2016) claim that the current VM guidelines are impractical. The guidelines for implementing VM are not comprehensive and contain ambiguous procedure wording. As a result, the guidelines have confused VM participants about their roles and responsibilities, including the QS themselves, who are arguably one of the most important participants of a VM team (Spellacy et al., 2021). Finally, organisations are less likely to adopt VM due to the fear of a reduction in professional service fees. This decision is predicated on the idea that professional fees for construction are determined by taking into account the project's expected total cost.

2.3 Strategies to overcome the obstacles to adopting Value Management

The first strategy to overcome the obstacles to adopting VM is to make VM knowledge accessible. Wei & Keong (2016) suggest that VM reference materials and information should be made publicly available to industry participants. Furthermore, Kim et al. (2016) emphasise the necessity of introducing the VM methodology in organisations by providing VM seminars and a sample VM implementation in some projects. Ling et al. (2020) also stress that the government or professional organisations like IVMM should actively promote the benefits and achievements of VM by exhibiting successful case studies to the general audience. Secondly, there should be mandatory VM training in the organisation. Kineber et al. (2022) and Li et al. (2022) suggest that construction professionals should receive formal training on VM principles, concepts, and methodologies from their organisations. Likewise, Lin et al. (2022) stress that organisations provide regular training and practices for participants of smaller projects on VM principles, techniques, and facilitation skills. Bowen et al. (2009) agree and recommend integrating contemporary VM theory and the application of VM in practice, including VM facilitator training and simulation workshops.

In addition, establishing a professional VM team is recommended for organisations (Li et al., 2022). Bowen et al. (2009) stress the importance of establishing a clear definition of the roles and responsibilities of the members in conducting a VM study. Having a certified VM facilitator pays, but the expert does not necessarily need to be a qualified VM specialist because of limitations in experience and resources (Jaapar et al., 2012). Also, there is no reason why someone with a surveying background cannot be an excellent VM facilitator (RICS, 2017). Moreover, it is critical to educate the clients about VM as one of the ways to minimise cost overrun. Ellis et al. (2005) find that educated clients most likely allow a series of interventions. Since Qs are in a good position to recommend that VM is used during briefing and feasibility studies (RICS, 2018), Ojo et al. (2023) suggest that holding a meeting could serve as an effective means of educating clients about the costs associated with running VM workshops as well as the substantial cost savings that can be realised by doing so.

Furthermore, the authorities should improvise law and contract provisions to accommodate VM implementation (King et al., 2020). Li et al. (2022) also recommend that the government facilitate the application of VM by formulating policies, regulations, and guidelines. Several documents related to the local context should be published in the construction industry (Kim et al., 2016). In addition, the government should improve the VM syllabus at higher educational levels. Tutesigensi et al. (2021) suggest that VM techniques and applications should be taught to undergraduate students in construction-related fields. Furthermore, postgraduate construction-majoring students should be able to practically implement the phases of VM on construction projects and receive theoretical instruction from academic institutions (Ojo et al., 2023).

Besides, the organisation should establish rules of adoption phases for VM, including the effort to regulate a standard reference, so VM studies are carried out efficiently. The VM Standard Reference will assist managers, value program managers, practitioners, and trainers in applying VM in their organisations in a consistent, standard manner (SAVE International, 2020). In Malaysia's context, guidelines for adopting VM have been established by the Economic Planning Unit of Malaysia (EPU, 2011). Wei & Keong (2016) and Saifulnizam et al. (2011) suggest that clients provide additional fees for VM services to those consultancy firms, as VM could be considered a new scope of work for them.

3.0 METHODOLOGY

This study employs a quantitative approach to achieve the research objectives. A total of 32 respondents participated in the survey, providing insights regarding the adoption of VM in their organisations. The survey responses were subjected to statistical analysis to identify trends and patterns. The questionnaire consists of four (4) sections: Section A, Section B, Section C, and Section D. The Statistical Package for Social Sciences (SPSS) software serves a significant function in analysing the data collected from the questionnaire survey. The questionnaire survey data for this study are summarised as descriptive statistics, where the frequencies or percentage distributions of the samples are described using tables. The researcher chooses the median as the measure of central tendency for this study because it is resilient to extreme values or outliers. Besides, for non-normally distributed data, the median provides a better central measure because it accurately reflects the centre of the dataset without being influenced by the shape of the distribution (Newbold et al., 2012).

4.0 RESULTS

The questionnaire survey was distributed to 128 QS firms registered under the BQSM through email, LinkedIn, and hand delivery. Out of the 128 questionnaires distributed, 32 were answered.

4.1 Adoption of Value Management

There are 12 items under five aspects of VM adoption listed in this section. The respondents were required to state their stance on the listed practice options (yes, no, or not sure) based on their experience. Table 1 shows the results of the VM adoption by their organisations. In the context of organisational practices, many respondents (59.4%) rarely practice VM in their organisation's projects. A significant number of respondents (81.3%) agree that others normally organise VM practices in construction projects with their organisation's participation.

Regarding VM phases, it is significant (65.6%) that the Value Assessment workshop is normally conducted during the initial stage of a project. Most respondents (81.3%) agree that a Value Engineering workshop is normally conducted during the design stage of a project. Half of the respondents (50%) indicated that the Value Review workshop rarely occurs after project completion. According to the type of construction projects, it is significant (81.3%) that VM is normally practised in building projects. The majority (59.4%) normally practice VM in civil engineering projects. A considerable proportion of respondents (46.9%) normally practice VM in specialised projects. Looking at the type of clients, most respondents (68.8%) practice VM in the public sector projects. Many respondents (81.3%) practice VM upon the client's request under private sector projects. From the aspect of contract value, a considerable portion (40.6%) rarely practice VM in the projects with a contract value below RM50 million. Most (78.1%) practice VM in projects with a contract value exceeding RM50 million.

Table 1: Value Management Adoption by Quantity Surveying Firms in Malaysia

No.	Value Management Adoption by Quantity Surveying Firms in Malaysia	Not sure		Yes		No	
		Qty	%	Qty	%	Qty	%
Organisation practices							
1.	Value management is normally practised in the projects your organisation undertakes.	0	0	13	40.6	19	59.4
2.	Others normally organise Value Management practices in construction projects with the participation of your organisation.	1	3.1	26	81.3	5	15.6
Phases of Value Management study							
3.	Value Assessment workshop is normally conducted during the initial stage of a project.	3	9.4	21	65.6	8	25.0
4.	Value Engineering workshop is normally conducted during the design stage of a project.	2	6.3	26	81.3	4	12.5
5.	Value Review workshop is normally conducted after project completion.	10	31.3	6	18.8	16	50.0
Type of construction projects							
6.	Value Management is normally practised in building projects.	1	3.1	26	81.3	5	15.6
7.	Value Management is normally practised in civil engineering projects.	8	25.0	19	59.4	5	15.6
8.	Value Management is normally practised in specialised projects.	12	37.5	15	46.9	5	15.6
Type of clients							
9.	Value Management is normally practised in the public sector projects.	9	28.1	22	68.8	1	3.1
10.	Value Management is normally practised on the client's request in the private sector projects.	2	6.3	26	81.3	4	12.5
Contract value							
11.	Value Management is normally practised in the projects with a contract value below RM50 million.	9	28.1	10	31.3	13	40.6
12.	Value Management is normally practised in projects with a contract value exceeding RM50 million.	5	15.6	25	78.1	2	6.3

4.2 Obstacles to Adopt Value Management

Table 2 shows the obstacles to adopting VM by Quantity Surveying firms in Malaysia. There are eight obstacles listed in the table. The respondents were required to rate their level of agreement for each problem listed in the questionnaire using a six-point Likert scale consisting of (not sure, strongly disagree, disagree, neutral, agree, and strongly agree). The research results summarised that 7 of the listed obstacles received more than 50% vote of agreement.

The majority of respondents (75%) agree that there is a time constraint due to the lengthy process of VM. Over half of the respondents (59.4%) agree that clients are reluctant to fund VM services. Many (56.2%) respondents agree that designers are reluctant to adopt VM in the projects and that there is a shortage of trained professionals in VM. 53.1% of the respondents agree that they fear the reduction in professionals' fees due to lower contract value after the VM workshop and inefficient conduct of VM workshops. These obstacles obtain a median score of 5, which indicates that respondents generally agree on these as a major problem.

Half of the respondents (50%) agree that decision-makers participate poorly in VM workshops. This obstacle obtains a median score of 4.5, which implies that respondents are leaning towards an agreement or a neutral stance.

Table 2: Obstacles in Adopting Value Management by Quantity Surveying Firms in Malaysia

No.	Obstacles in Adopting Value Management by Quantity Surveying Firms in Malaysia	Agree + Strongly Agree		Median Score (Scale)	Likert Scale
		Qty	%		
1.	Time constraint due to the lengthy process of Value Management	24	75.0	5	Agree
2.	Client's reluctance to fund Value Management services	19	59.4	5	Agree
3.	Shortage of trained professionals in Value Management	18	56.3	5	Agree
4.	Reluctance of designers to adopt Value Management	18	56.3	5	Agree
5.	Fear of a reduction in professional fees due to a lower contract value after the Value Management workshop	17	53.2	5	Agree
6.	Inefficient conduct of Value Management workshops	17	53.2	5	Agree
7.	Low participation of decision-makers in Value Management workshops	16	50.0	4.5	Neutral-Agree
8.	Misconception about Value Management by industrial practitioners	13	40.6	4	Neutral

4.3 Strategies to overcome the obstacles to adopting Value Management

Table 3 shows the strategies quantity surveying firms use in Malaysia to overcome the obstacles to adopting VM. Eight strategies are listed in the table. The respondents were required to rate their level of agreement for each problem listed in the questionnaire using a six-point Likert scale consisting of (not sure, strongly disagree, disagree, neutral, agree, and strongly agree).

The research results summarised that almost all the listed obstacles received more than 50% of the vote of agreement.

The most significant strategy is to educate the clients and decision-makers about the importance of VM, which receives the highest agreement vote (96.9%). The second most prominent strategy (90.7%) is to make VM knowledge accessible, followed by the next (84.4%) to improve the VM syllabus in higher education institutions. The strategy to establish a VM team in the organisation received 78.2% agreement, while 75% of the respondents agreed on mandatory VM training. Subsequently, 68.8% of the respondents agree that providing additional fees for VM services is an effective strategy. These strategies obtain a median score of 5, which indicates that respondents generally agree on these as potentially effective strategies.

Table 3: Strategies to Overcome the Obstacles in Adopting Value Management by Quantity Surveying Firms in Malaysia

No.	Strategies to Overcome the Obstacles in Adopting Value Management by Quantity Surveying Firms in Malaysia	Agree + Strongly Agree		Median Score (Scale)	Likert Scale
		Qty	%		
1.	Educate the clients and decision-makers about the Importance of Value Management	31	96.9	5	Agree
2.	Make Value Management knowledge accessible	29	90.7	5	Agree
3.	Improve the Value Management syllabus in a higher education institution	27	84.4	5	Agree
4.	Establish a Value Management team in the organisation	25	78.2	5	Agree
5.	Mandatory Value Management training in the organisation	24	75.0	5	Agree
6.	Provide additional fees for Value Management services	22	68.8	5	Agree
7.	Establish rules of adoption phases for Value Management	16	50.0	4.5	Neutral – Agree
8.	Improvise law and contract provisions	13	40.7	4	Neutral

Only half of the respondents (50%) agree with the strategy to establish rules of adoption phases for VM, revealing a median score of 4.5, which implies that respondents are leaning towards an agreement or a neutral stance. Lastly, the strategy to improvise law and contract provisions receives the least vote (40.7%), obtaining a median score of 4, indicating that respondents have a neutral opinion.

5.0 DISCUSSIONS

5.1 Adoption of Value Management

The findings reveal that the adoption of VM by Quantity Surveying firms in Malaysia is still low, as Li et al. (2022) suggested, as the VM services are not provided by and integrated into most organisations. In addition, although Wei & Keong (2016) claim that VM is best implemented through the project management services rather than utilising it as a mere option towards a particular project, VM is still proven to be adopted based on the type of projects. The selective adoption of VM is similar to what Jaapar et al. (2012) have studied, where VM is adopted in infrastructure, residential, and flood irrigation projects. The findings also reveal that the adoption of VM by the QS firms in Malaysia is moderate, as many organisations abide by the standard phases of VM from the initial stage up to the design stage of the projects. This contradicts what Ghani et al. (2021) suggested, where a VA study is performed after the project budget approval, and opposed to what King et al. (2020) claimed, where VE is frequently done only after the contract has been signed and upon the commencement of the construction. However, most organisations seldom carry out VR after project completion, as Ellis et al. (2005) supported, where they find that the VM process rarely goes beyond the tender stage.

However, the findings reveal that the adoption of VM by the QS firms in Malaysia is relatively high based on the type of clients served. This proves that VM is frequently adopted voluntarily or on the client's request, as revealed by King et al. (2020) and Usman et al. (2013). From the aspect of contract value, it is proven that regardless of project type, the adoption of VM by organisations for smaller construction projects is relatively low and highly dependent on the project size, as supported by Lin et al. (2022). However, it has been proven that VM is widely adopted in projects valued at RM50 million to achieve higher cost savings, increase project quality, and foster innovation.

5.2 Obstacles to adopting Value Management

The findings reveal that the most significant obstacles in adopting VM by Quantity Surveying firms in Malaysia are time constraints due to the lengthy process of Value Management, with the highest vote from 75% of respondents. It is undeniable that VM is a time-consuming process, as suggested by the RICS (2017); hence, many organisations admit that VM's lengthy process hinders them from making VM one of the core services in their organisations. The second obstacle ranked the highest is the client's reluctance to fund VM services. It aligns with Bennett & Mayouf (2021), who stated that convincing the client to pay for a certified facilitator for VM practice can be challenging. The following obstacle is the reluctance of designers to adopt VM. This result is consistent with the study by Ling et al. (2020), which proves that resistance from designers is one of the hindrances to implementing VM by the QS organisations. Certainly, the misconception that VM studies reflect a designer's incompetence and integrity is why designers are unwilling to consider alternative approaches and revisions to their designs, as suggested by Rad & Yamini (2016).

Besides, the shortage of trained professionals in VM is also a concerning problem. Not only does the construction industry lack VM specialists, but many organisations do not provide VM training for their staff, as claimed by Kineber et al. (2022) and Lin et al. (2022). This finding proves that the chance of a QS being the second-best candidate for VM facilitation in Malaysia is a missed opportunity due to a lack of formal training in VM. Another obstacle is the fear of reduced professional fees due to lower contract value after the VM workshop. The finding proves that many organisations are predicated on the idea that professional fees for construction are determined by taking into account the project's expected total cost, as Ojo et al. (2023) supported. They are afraid that the output of conducting VM will reduce the contract value, resulting in earning lower consultation fees. Lastly, the findings from the obstacle of inefficient conduct of VM studies reveal that many QS firms participating in VM workshops conducted by other consultants carry out the process informally, disregarding the existing VM manual. This is supported by Spellacy et al. (2021), who found that the VM study process has not been carried out efficiently, ultimately leading to ineffective outcomes.

5.3 Strategies to overcome the obstacles in adopting Value Management

The most significant strategy to overcome the obstacles in adopting Value Management is to educate the clients and decision-makers about the importance of VM. This strategy aligns with a study by Ellis et al. (2005), where they found that educated clients would most probably allow a series of interventions throughout the contract period, especially during briefing and feasibility studies. The second strategy, ranked the highest, is to make VM knowledge accessible. Instead of limiting the purchase power to acquire the knowledge of VM, the regulating bodies should make VM reference materials and information publicly accessible to industry practitioners. This is consistent with what Kim et al. (2016) have emphasised, where it is also essential to introduce the VM methodology in the organisations by providing VM seminars and a sample implementation of VM in some projects. The following strategy is to improve the VM syllabus in higher education institutions. This strategy aligns with the studies conducted by Tutesigensi et al. (2021), suggesting that VM techniques and applications should be taught to undergraduate students in construction-related fields such as the Department of Quantity Surveying, Building Surveying, Building, and Construction. By preparing the students with the necessary skills and knowledge about VM, this strategy might overcome the obstacles to the adoption of VM by the QS firms in Malaysia.

In addition, establishing a VM team in the organisation may be an effective strategy to overcome the obstacles to adopting VM by the QS firms in Malaysia. This strategy is consistent with what Li et al. (2022) have suggested in their study, where it is recommended for organisations to establish a professional VM team and develop a management model with a defined subject. Besides, RICS (2017) acknowledges that the QS should become an excellent VM facilitator representing their own organisations. Also, it is important to enforce mandatory VM training in the organisation. This strategy is emphasised by Kineber et al. (2022), Li et al. (2022) and Lin et al. (2022) in their studies, and it also applies to all QS in any organisation. Hence, QS firms should provide their employees with regular training and practices, including VM facilitator training and simulation workshops, as suggested by Bowen et al. (2009). Finally, the respondents suggest that the clients provide additional fees for VM services to the QS firms. Although some QS consultant companies do not officially offer VM services to the client, they must participate in the VM studies of selected projects in collaboration with other clients' consultants. Therefore, the regulating bodies must serve justice for the QS firms and consider the additional fees to those consultancy firms, as VM could be considered as a new scope of work for them, as supported by Wei & Keong (2016) and Saifulnizam et al. (2011).

6.0 CONCLUSION

The adoption of VM by Quantity Surveying firms in Malaysia is currently quite low. Several obstacles are holding back wider implementation. These include time constraints due to the lengthy process of Value Management, the client's reluctance to fund Value Management services, the reluctance of designers to adopt Value Management, and the shortage of trained professionals in Value Management. To overcome these challenges, several strategies can be employed: to educate the clients and decision-makers about the importance of Value Management, make Value Management knowledge accessible, and improve the Value Management syllabus in higher education institutions.

In conclusion, while the adoption of VM among Quantity Surveying firms in Malaysia is currently limited, addressing the identified obstacles through strategic initiatives can significantly enhance its implementation. This can lead to improved project outcomes and greater efficiency in the construction industry. Future research should focus on the current state of training and education in VM within Malaysia. This includes assessing the availability and quality of training programs and exploring ways to enhance the skills and knowledge of professionals in the field. By addressing this recommendation, future research can contribute to a deeper and more comprehensive understanding of VM practices in Malaysia, ultimately leading to improved implementation and outcomes in various industries.

ACKNOWLEDGMENTS

The authors would like to express their gratitude and appreciation to all those who contributed to this study, either directly or indirectly.

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